DOCUMENT RESUME

ED 334 178 SP 033 164

AUTHOR Williams, David D.
TITLE Student Teachers as Naturalistic Inquirers.
PUB DATE Apr 91
NOTE 12p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April 3-7, 1991).
PUB TYPE Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cooperating Teachers; Evaluative Thinking; Higher Education; *Journal Writing; *Naturalistic Observation; *Participant Observation; Personal Narratives; *Research Skills; Secondary Education; Student Teachers; Student Teacher Supervisors; *Student Teaching; Theory Practice Relationship
IDENTIFIERS Brigham Young University UT; *Reflective Teaching

ABSTRACT

This study was conducted in order to examine the efficacy of involving student teachers as naturalistic inquirers during their field experience. Such tasks as taking fieldnotes, doing simple qualitative analyses, writing brief summary reports, and learning to think critically about educational issues while learning to teach, is a very helpful approach for preparing teachers. The study was undertaken in 1989 in a moderately large high school and involved a university supervisor, two cooperating teachers, and four student teachers. The students agreed to keep fieldnotes as part of their experience and to share those notes with their supervisor on a regular basis throughout the year. During the 1990-1991 school year, a new group of 5 student teachers participated in this experience; the supervisor taught them naturalistic inquiry while their cooperating teachers taught them how to teach. The students' fieldnotes and conversations with the university supervisor, the cooperating teachers, and other student teachers were analyzed. The data analysis revealed that the process of involving student teachers as naturalistic inquirers works for both student teachers and cooperating teachers, and it gives the university supervisor a wealth of information against which to judge the quality of the student teachers. (Most of this document is comprised of excerpts from student teachers' journals.) (LL)

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STUDENT TEACHERS AS NATURALISTIC INQUIRERS[1]

David D. Williams
Associate Professor of Instructional Science
Brigham Young University

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Perspective

The literature on teacher preparation suggests that one of the most important parts of that educational process is the student teaching or field experience. However, the pedagogical practices of student teaching continue to be criticized as less helpful than they could be (Lanier and Little, 1986). Some of the criticisms are:

1. As practiced, the field experience fosters a group management attitude rather than an intellectual leader orientation for the teacher;
2. The experience is overwhelming to most student teachers so that management of students takes precedence over learning;
3. Participants are encouraged to think their best learning comes from trial and error rather than through careful thought and scholarship; and
4. Adequate opportunity for both learning of skills and theoretical principles is missing in the typically short field experience.

Guyton and McIntyre (1990) confirm this literature in an extensive review and call for research on critical questions about the field experience such as the following from page 518 of their article: "What strategies can be implemented to encourage student teachers to be students of teaching and reflective about their behavior and surroundings?" These authors further urge the use of naturalistic inquiry to study the student teaching experience from the perspectives of the participants.

Several authors have recently encouraged teachers to be more thoughtful and reflective about their work by conducting qualitative or naturalistic research as a natural extension of the inquiries they make already in their classrooms and with their students (e.g., Fosnot, 1989; Goswami and Stillman, 1987; and Hitchcock and Hughes, 1989). Goswami and Stillman note (in the preface) that several exciting results accrue when teachers "conduct research as a regular part of their roles as teachers." For example, they find that teacher-researchers:

1. become theorists regarding their own practice, testing their assumptions against their practices;
2. perceive themselves differently, forming networks and becoming more active professionally;
3. provide invaluable insights into the learning process to the profession and to other researchers because of their insider perspectives; and
4. critically read and use current research from others, being less vulnerable to fads.

Connecting the literature on student teaching with the literature on teacher inquiry, the author hypothesized that if it is true that naturalistic inquiry is needed to investigate the student teaching experience from the participants' perspectives and that teachers should participate in naturalistic inquiry, then student teachers ought to productively join in this process too. The process of learning to teach through an apprenticeship with master teachers ought to be enhanced by simultaneously learning to naturalistically inquire collaboratively with a skilled university researcher/supervisor. And it seemed to make sense that if they learned the skills early in their careers and had some success doing research while learning to be teachers, student teachers might be more inclined to continue to be learners when

[1]A paper presented at the Annual Meeting of the American Educational Research Association, April, 1991 in Chicago, Il.

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they become teachers. The research to be presented came from an exploration of these ideas in a school setting.

Methods

This study grew out of a naturalistic study the author has been conducting in a moderately large high school since January 1989. In addition to the study of an innovative program and two teachers in the school, the author took on a university supervisory role in Fall, 1989 with four student teachers who agreed to participate as apprentices in that program for the full nine months of the 1989-90 school year. They agreed to keep fieldnotes as part of the experience and to share those notes with the author on a regular basis throughout the year. During the 1990-91 school year, a new group of five student teachers participated in this experience, with the supervisor teaching them naturalistic inquiry while their cooperating teachers taught them how to teach. They decided to collaborate with the author to study about learning to be teachers through naturalistic inquiry and student teaching apprenticeships.

The procedures used by the author and by these inquiring student teachers were typical of naturalistic or ethnographic studies with ongoing qualitative analysis. The author was a professor of education at a large university who spent 2-3 full days per week in the school over one entire 1989-90 school year (plus 4-5 days per month for five months of the 1988-89 school year and all of the 1990-91 school year). He spent the majority of that time with two teachers and their students but had many opportunities to observe and interview students, teachers, and administrators throughout the school. The student teachers spent more time per week in the school; however, each student teacher was there for only nine months. They observed and interviewed the cooperating teachers and the high school students at first and then gradually began teaching while continuing to collect and analyze qualitative and quantitative data. The author worked with them to refine their observation and interviewing skills. They also analyzed documents produced by the teachers and students, such as curriculum files and student work. Analyses of the fieldnotes were conducted both individually and jointly by the author and the student teachers throughout the course of the study.

Fieldnotes containing observations, interview transcripts, document analyses, audit trail indices, interim analyses, and reflections of the researchers were maintained throughout the project. Computer programs (SONAR) designed to aid in the analysis of qualitative data were used in conjunction with domain, taxonomic, componential, and theme analysis techniques described by Spradley (1980). Criteria outlined in Lincoln and Guba (1985) and by Williams (1986) were followed to ensure the credibility and utility of the inquiry (these included such precautions as prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, member checking, thick description, and maintenance of an audit trail).

Data Sources

The principal data sources for the findings to be reported were the participating student teachers, the two cooperating teachers, and the author (who was the supervising teacher). Of course, their experiences with the high school students, other teachers, and administrators of the school lead to the creation of that data. The school is a moderately large (about 1700 students) three-year high school in the Western United States. The student teachers spent about half of their time with an innovative program created by the two teachers which integrates science, social studies, art, recreation and English into an interdisciplinary program for juniors and seniors from all academic levels.

Results and Conclusions

The detailed results of this inquiry are extensive, as might be anticipated in contemplating the fieldnotes that would be developed by nine student teachers and the university participant observer. Well over 3,000 pages of notes were accumulated on the hard disk of a Macintosh IICX from all these sources and analyses have continued cyclically from the beginning of the study until now. For

purposes of this presentation, quotations from the fieldnotes of the apprentices and the university supervisor will be cited to illustrate four key conclusions culled from this broad experience.

Conclusion 1. All the student teachers or apprentices began their year both excited and confused about everything they were going to do-- how they were going to teach, how they were going to manage the students, how they were going to work with the cooperating teachers, how they were going to conduct research at the same time, and whether they really wanted to do this for a whole school year. These concerns the student teachers were having are reflected clearly in their fieldnotes and in their conversations with the university supervisor, with the cooperating teachers, and with each other.

> **Apprentice 1:** I've been a little unsure about exactly what will be expected of me in this program. In the meeting we had on Tuesday, it was explained that we, as apprentices will be observing for the most part for the first two months. I really think that this is a good idea. This program is so new and different from anything else we've had experience with that I think it would be hard for us to get a feel for what Simon and Carol [the cooperating teachers] are trying to accomplish. I do believe in learning by doing and experiencing; but it will be good to learn a little bit in more of a student role at first. The kids will benefit also, I think, if we are more aware of what the Program involves.
>
> Another thing that was mentioned in that meeting was the fear of the new. We were warned that we would be put into situations that we aren't fully comfortable with. We'll just have to take a risk and maybe fail a few times before we learn and can do the skill well. I've experienced a few times doing something that was uncomfortable and frightening. To tell you the truth, I don't like how it feels; but I really enjoy finally mastering something that I've struggled with.

> **Apprentice 2:** Somehow I got confused and came for our first meeting with the cooperating teachers and the supervisor an hour early; but it was a good opportunity to just sit and absorb the room and watch Carol and Simon in action. It's easy to just disappear in that yellow couch, Carol and Simon both are so busy. Each seems to be running in a million directions and every now and then their paths cross as they ask one another a question. They get side-tracked for just a second and then they're back at it making a phone call, talking to a fellow teacher who just popped in, letting a student know how impressed they are with a specific accomplishment, deciding who should head a certain project, deciding dates for coming activities, etc. I felt pretty much out of it. I felt as though I needed to be doing something, as though I was wasting time; yet I had no idea what I should be doing so I just kept listening in almost as if I wasn't there. Later when Carol was discussing the importance of getting to know the students and told of an experience in which a student had felt intimidated by Carol, I could relate. She seems to be in such control, knows what she believes and why and seems to live up to it, at least closer than lots of us, and she's not afraid of many things, least of all speaking her mind. I felt pretty distant from both her and Simon at first; but it didn't last long, as they both took time to talk to me personally and all of a sudden it's like we've been friends for a long time.
>
> As the meeting started I was still feeling pretty green and all ears, not much to say. Plus Carol and Simon were so excited and had so much to say, almost as though they wanted us to learn everything on the first day, but at the same time realizing that they couldn't, so kind of frustrated in the process.
>
> Personally I am thrilled that this year will be a type of apprenticeship. I feel so unprepared right now. I know I love to teach and I love to see people learn, grasp an idea and begin to see it's implications and then the desire to understand more starts to spark. I love that, but I don't feel so confident in my ability to help someone achieve that at this point. But at the some time I know I can with a lot of practice, experience

and help. Hopefully not too many students will suffer in the meantime. Anyways, this is like a dream come true or actually more like an answer to a prayer! I'm also excited about the opportunity to experience The Program as a student to the degree possible. It's been over six years since I graduated from high school and I do really feel distant from that period and age group and I feel a need to remember how it felt, what I thought like, etc. in order to better teach and understand the students. That's already happening to a certain degree as I walk down the halls and am mistaken for a student

I'm also thrilled to be able to work with teachers who really do seem to be master learners, excited to learn about many fields. It shows as they talk. To be able to get feedback from them and to be able to observe them teach is an opportunity of a lifetime. I'm really not so concerned about the credits I'm getting, probably partly because I already have so many, but mainly because this is an opportunity that money can't buy.

Keeping a journal [fieldnotes] will be good for me. I've never been very faithful at it, if I wrote at least once a month in the past I would have been proud. I'm seeing how important it is to becoming a researching teacher as there are thoughts and ideas that come daily, hourly, minutely that really do get lost if they are not written down and even though they ring true when you hear them again, they aren't much good unless you remember them so that you can start expounding upon them.

I was glad when Dave [the university supervisor/researcher] pointed out the importance of observing Carol and Simon all of the time by giving us an example from his fieldnotes. That helps me understand what type of notes we're to be taking more than anything, other than when I leaned over Dave's shoulder and read what he was noting. There was so much more there than I had observed or took note of. My notes have been more on ideas presented and not so much on what are they doing that helped me learn that specifically. I guess I'm still more at home taking notes on what people say and not on why or how.

I'm beginning to realize more and more each day and especially as I'm trying to catch up on past ideas that I need to grasp every moment. Soon I'll be having to choose which students are in the Program, which issue to work on and how, which student to head a committee, etc. Will I be ready?

Apprentice 3: The Apprentices will become involved in the class as students. We will take extensive field notes on our day to day activities but other than that we will do no actual teaching or presenting to the students for 2 or 3 months into the year. Carol commented that we would need to ease into this experience and we will see a lot of change and growth in us and the other students. In talking about coming up with new ideas and doing them Simon said, "Be prepared for failure and be ready to be frustrated." He told us that many of the ideas that come up are good ideas; it is just figuring out how to approach them that is the trick. I can't wait to begin!!

It seems like the same types of people sit together in here. There are the girls that sit together that seem a step above everyone else. They all have long silky hair with no bangs. None of them wears much make-up. They have a few guys sitting amongst them who are the macho type. At my table are the cowboys. They all wear cowboy boots, but probably don't ride horses. They have short hair in front and long hair in back. They talk really big about what they can do or have done. Another table has guys on it who are content to be normal. They don't try to wear strange hair do's or pierce they ears. They are nice to talk to. Another group is made up of guys who seem to be pretty popular in the school. They're cute and funny and seem to be pretty sure of themselves.

I am being terribly judgmental. I want to write down these first impressions I am having so that I can go back later on and laugh at myself for what I had thought previously. I know that my judgements are probably far from the truth. I want to see how my perceptions change and why.

After I had collected some leaves I sat down by the stream with-in earshot of the students. As I was sitting listening, Todd came and sat down beside me. I had previously asked him his name and talked to him for a few minutes on the bus and I believe we established a friendship in that short time. I doubt many girls try to talk to him. He's a shy boy, he has that "high school boy skinniness". He's not very tall, maybe five feet seven or eight. He has glasses and a dirty blonde color of hair.
"Hi, Todd, how's it goin'?" I asked.
"Oh, o.k."
"Now tell me again what your last name is?"
"Brickell."
"Oh yeah. I'm not going to forget that again. At least if I do, I won't tell you o.k.?" I jeered.
I got a smile out of him. Silence. He began taking out his lunch he had brought with him. One bundle of Seran wrap contained 5 or 6 pieces of jerky. He offered me one and I accepted. Silence. Finally, Jana sat down on the other side of Todd and her friend Leslie, sat down next to her. Leslie began talking about her boyfriend. Todd didn't say anything. He packed up his lunch and got up to leave.
"Thanks for the jerky Todd." I said.
"Oh, that's allright." He timidly replied.
He seems so unsure of himself and I think that by taking just that little bit of interest in him, I helped boost his self esteem and hopefully, in time, he will come out of his shell.

We went back to the school and watercolored for the rest of the time. Jo began painting a rainbow. She kept worrying that no one else was painting a rainbow but her. She thought it was ugly and was going to throw it away. I told her she should keep it because when she is a famous painter, someone will pay thousands of dollars for her first attempt at painting. She kept it. I think she has low self-esteem. I wish I knew what to do to let her know that it doesn't matter what anyone else thinks, just herself. Maybe I shouldn't compliment her anymore. I don't know.

Apprentice 4: It is hard to judge myself and how I will teach. (Can we borrow equipment from the university and secretly monitor each other; later let the "victim" review the tape with you and possibly the other apprentices?). It seems like I have so many aspects that I am not so sure of within me. I talk about loving open discussions and seeing all views, but do I allow that or do I really control things very much? I plan things out so much in my mind in so many ways that I worry that my directing could get too forced. I hope not.

It was a great experience reading each others' fieldnotes. Each one added an angle that I had forgotten about. I can not believe that the hike was not even mentioned in my report. I focus on my emotions and reflections too exclusively. It was very interesting to hear my observations on Carol and Simon confirmed. It kind of bothers me that I will write a note to do something about my impressions but then I forget to look into it further. I have to follow-up on more of my feelings.

Apprentice 5: During this summer, when asked about my plans for the fall, I proudly informed my inquirer, "I'll be interning at UHS." Nothing but excitement and anticipation filled my thoughts. As the beginning of the school year neared, many other thoughts and feelings entered my mind. How would I discipline? How would I balance the roles of teacher and friend? What if I couldn't cut the profession? Could I endure 85 minute class periods? I was used to 5 minute micro lessons. And an all day class--for crying out loud--I was going to be bored stiff. Several high school students I met during the summer offered bunches of cautions and warnings. "Don't plan a whole lot of stuff and not follow through." "Don't be a hardass." "Don't let the kids get out of hand." I began to work these statements over, thinking how I could handle

each of them. I decided to let the kids know who was boss, but I hated the thought of the disciplinarian role.When we finally met with the other apprentices and the cooperating teachers at the end of the summer, I felt more at ease. I also felt more anxiety.

Conclusion 2. About two months into the school year, the student teachers began feeling fairly confident about their abilities to conduct naturalistic inquiry and they took on more and more of the teaching role too. Their fieldnotes reflected an increasing ability to describe what they were hearing and experiencing. They included more concrete and insightful descriptions of the physical and historical settings involved, the participants, the activities and events, the verbal and non-verbal communications of the participants, and their presence and involvement as participant-observers. Their reflections on the experience grew richer with time too. They more freely included their own feelings as participants in this experience and they incorporated many kinds of analysis too. There was marked improvement in the quality of the inquiry as well as the teaching being done over the entire nine months.

Apprentice 6: Up to this point, I have learned much at UHS. The motto of this Program is, "Self-fulfillment begins when self-pity ends." When I drove away from the class session at the Reservoir on Tuesday, I really felt satisfied. I felt satisfied that I had tried a new activity--windsurfing. I was not very good at it, but I had tried; and in trying, I was successful. I believe that the fear of trying dominates many people. I believe that this fear exists in the schools. Students fear failure. They fail to realize that trying is not failure, but the beginning of success and personal triumph. True failure is found in failing to try. Students must be taught to try. Teachers must teach students to try. Teachers must try themselves. Teachers must teach students to try by themselves. Too much attention is placed on the final copy, the perfect person, the "A" grade, without sufficient emphasis on the attempts, the efforts, the trial-and-error that leads to the final end. Students must understand that perfection is a process, and along the way it is right to make mistakes. Learning comes from mistakes. Students must be encouraged to welcome mistakes, and then learn from them. How I started on this, I don't know. The classroom must have student involvement. Many teachers are good talkers, but not good teachers. Of course the teacher knows the material, but does he/she know enough to help the students know it for themselves through involvement? A teacher must ask questions, ask for ideas, ask for input. Is it wrong to even have a student teach? Aristotle said, "Teach, so that you may learn."

Apprentice 7: Carl is a quiet type--the kind that you wouldn't imagine would say boo to a ghost. Last night when we were gathered around the fire, he sat curled up in the smoke rather than fight for a place on the unsmokey side of the fire ring. But there is alot more to Carl than meets the eye. A couple of days ago his grandfather died. On the day of the funeral his grandma had a heart attack. He is in AP History and stayed up all night the night before the hike doing an AP assignment (that he had not been able to do earlier because of the family circumstances). I was especially impressed with the way he directed our little group. Though I was the intern [apprentice] there was no question as to who was the leader of our little group. He gave an interesting trail side commentary. When we came to a fork in the trail he said "You can get there if you turn left but we'll go right". When we entered the meadow that borders the lake he said, "The trail ends here. You'll have to remember these two rocks to find the trail out again." You know, by gum, I did look for those two rocks when I wanted to head home again and I was able to find the trail.

Apprentice 8: Today was mammal day. The groups were to review their notes and then we played a game with them to help them review for the test. I left my group

alone because Carol and Simon wanted it to be an activity for the groups to do on their own so they could teach themselves and be responsible for the information on their own. I left my group alone and talked with the other interns. As we were talking, a girl (not a member of the class) came in and was visiting. I said, "OK, who is going to kick her out?" The two other male interns who were with me said, "Oh Deb, let her be. She isn't hurting anyone and she has been yelled at already so she doesn't need someone else nagging her." I said "But we have been asked to have these people leave when they just walk in from the halls like this." They replied that they guessed they just did not care anymore. That really bothered me because if they don't care anymore, we have problems. It is also hard because we need to be unified in what we do or the students will be harder to handle. I don't want to compromise on this one because Carol and Simon asked us to do this. So I guess I will just keep doing what I feel I should.

One positive part of the day was that we [apprentices] got to plan our lesson for the 11th. We will do a lesson on the media and we have it planned out. We decided what direction we wanted to take and we made assignments and then we will get back together and we will refine our plan. That was cool because I know this will be a good lesson because we will be so prepared.

Carol asked me to chaperone the Christmas Dance on Dec 2nd. I wasn't excited about it but it turned out ok. I sat at the table where everyone had to pay to get in so I saw everyone that came in the door. It was an exciting experience for me because I knew so many students and they talked with me and acted like they liked me and enjoyed knowing me and also I was able to show them that I cared. I just enjoyed feeling like I was a part of their lives and maybe I can make a difference by letting them know I care and I believe in them.

Apprentice 5: I don't ever remember learning so much about human relations. This semester, I've begun to realize that people don't have to love all of me. I used to take offense and get all upset when someone would criticize--even constructively--me, suggest things to me, put me in my place. But somehow, someway, I've learned that not all of me is lovable and even the parts of me that I cherish and adore, others may not enjoy as thoroughly. That doesn't make me a bad person. Slowly, I'm learning to listen without taking offense, without playing games. My students have helped me to do away with this terrible habit of taking things personally. You can't please everyone all of the time. For instance, when Carol talks on a personal philosophical level to the class, especially about their experiences, I really enjoy hearing what she has to say. However, I've heard some students call her preachy. And it's really funny to note the students' reactions to some of the projects we have. Bill cannot be pleased. Everything we do is stupid. And if it's not stupid, it's boring. Del and Stan, on the other hand, make the most out of every experience. At any rate, you can't please everybody at the same time.

Apprentice 2: The bus ride to the elementary school outing was fun. I kind of forgot about observing all the high school students and got into talking with the 3 little boys next to me. Kids are so incredibly cute. All I needed to do was ask them about 3 questions and they took off. I had to hold them back so that I could hear just one talking at once. They really do need to be listened to just like the rest of us. They have tons to say, I wonder where that extremely idiotic saying of kids should be seen and not heard came from?! I definitely will need to remember that whenever I'm with kids, and especially when I'm a parent. That reminds me of one of my professor's statements about how we need to do less for kids and more with them. It's so easy to talk at them and think I'm doing them such great favors, when I should just let them ask for me when they need me or if they want me along. I guess it's just getting back to the person-to-person instead of position-to-postion attitude. And if kids need it, how

much more do teen-agers?! I guess they've already had the position-to-position notion drilled into them, maybe that's why having a meaningful relationship or talks with adults means so much to their self-esteem. It's such a rarity to go against the norm that you're something special if you have such a relationship.

Getting back to letting the student seek me out (after I've made it clear that I'll listen), I really think that that is when the student is ready to learn. I know I've heard Carol and Simon talk about that in reference to cross-country skiing and telling students nothing about how to do it until they are out there on the skiis. At least that has been my experience, those things that I've sought out the teacher on I remember, plus they were things I wanted to know badly enough to get out of my comfort zone and ask the teacher about. Man, there is so much to write, I'm still getting over-whelmed with all that can be written. Basically I learned more through my own experiences than observing the students.

Conclusion 3. Although they had moments of insight that alleviated their initial feelings of confusion during the first few months, the greatest increments in understanding about what was going on with this innovative program and what the two teachers were trying to accomplish came when the student teachers attempted to write summaries about what they were learning about the Program and their experience in it. Somehow, the synthesis writing process helped them see patterns that made sense but which they had not seen while deeply involved in the more descriptive kinds of fieldnote writing.

For example, one student teacher had almost decided she was not going to teach this way when she had her own class. But in February, when she began writing a synthesis paper for a university assignment and was asked to defend it before external reviewers, she discovered that although she would make some modifications, she was very pleased with the approach being taken in this program and intended to use it as the basis for her own programs. She and the other student teachers agreed that they needed the whole nine months to really understand the educational programs they were involved with as well as the process of naturalistic inquiry which they used.

Supervisor's notes: I am excited about the changes that I have seen coming over Trudy since she has been writing up the summary of her experience at UHS. Somehow, the writing process has helped her see many of the good things about the Program that she didn't recognize before. I talked to Carol today and she is really excited about what Trudy is doing too. She says she can see a big change has taken place because now Trudy "owns" the experience. She said they have talked about how students "hit the wall" in their progress and they either get over it or stop. Carol believes that is what happened with Trudy. They discussed how the interns couldn't understand what she and Simon were trying to explain about their philosophies at the beginning of the year and how that has changed now.

Apprentice 7: Writing this thesis increased my appreciation of the Program. Because I needed to describe the Program, I had to observe it carefully. Because I needed to present my observations in an understandable and useful manner, I had to examine them carefully. Because I needed to write what I had concluded as a result of my examination, I had to reach conclusions. As I examined and analyzed my data I became increasingly aware of the program's merits. For example, I had no idea starting out that the Program corresponded so well with reformer's suggestions [in the literature]. Likewise, it wasn't until I completed writing the "Implementations" section that I realized how well The Program ideologies and implementations coordinate. Writing the thesis forced me to look deep and the deeper I looked the more I understood. This understanding dissolved many doubts and explained away many concerns.

The researcher interviewed the interns as a group about their activities as student teacher- researchers, asking about the process of taking fieldnotes and their value for

these people. The resulting transcript illustrates the importance that writing took on for these student teachers over the course of this experience.

Jody: For me what would be helpful is just to have my notes out and jot down things. When I jot it down, it usually comes back to me. I might not get a lot of people verbatim. The only people I get verbatim are when I'm sitting next to somebody and they say something out of context or I'm taking notes on what Simon or Carol are saying. I get that verbatim but it's rare to get other things verbatim. I mean, I can kind of get the gist, or I can get my viewpoint on what was going on, their attitude or whatever. But I really like it. I mean, it's hard, but I would love to do, I would like to do a lot more than I'm doing.

Kris: One thing that I just wrote in my notes Friday was that I was sitting there taking the notes, just in here listening to Carol and then listening to Nate. And I missed, because, you know, we've been teaching more and more, and so we haven't had time to just sit and discuss, or, you know, and I miss that because I really like to do that and I like to sit there and just write down things that happen and things that I notice or something and so it's been harder to take notes because I've been teaching more. Does that seem like what the rest of you are feeling?

Jody: The best is if I can get to it right after school; but usually I've got all these things I need to take care of before five o'clock and then six o'clock rolls around and . . .

Interviewer: Well, what do you get out of doing it?

Jody: What do I get out of doing it?

Interviewer: Yeah. Most of what you guys have been talking to me about is how you're doing it. I mean you aren't getting any credit for doing it, so why do it?

Jody: Oh, I get a lot out of it. I mean, just like just right now. If you guys hadn't been talking about respect, you know, and how we were at the beginning of the class-- Right now I just thought back to our problems with our English class and stuff, I wouldn't have associated what I just experienced [in the class I just taught] with it. I wouldn't have even written it down in my notes, probably. It's just that talking about it.... And the same thing, if I'm writing it down, all of a sudden different things come up.

Interviewer: It's another way of having a conversation.

Yeah. It's just a time to really contemplate on it. I get a lot more out of it if I'm thinking back on it. Because when it's happening, I don't really realize what is happening usually. But I remember it was <u>significant</u> or I <u>felt</u> something there, so when I'm writing it, then I'm going, "Oh, this is what happened!"

<u>Conclusion 4.</u> Because the student teachers and the university supervisor were keeping extensive fieldnotes and meeting to discuss their analyses and insights, the cooperating teachers were able to respond to very specific concerns and questions from these participants. The inquirers came to think of these two teachers as collaborators in their studies as well as participants who could "member check" their write-ups for accuracy. The cooperating teachers came to appreciate and support research in their classroom and in the school generally because they saw how helpful inquiry could be to them. They learned more about their own teaching processes and their students than they had done without

these additional "eyes" in their room. The teaching of the class actually became a joint effort of the teachers, student teachers, and the university supervisor.

As one of the cooperating teachers said at the end of May to the supervisor/researcher: "I think the number one thing we need to work on for next year is finding a way to incorporate you permanently into our program." When it was suggested that the apprenticeship program continue the next year and that the student teachers should take even more fieldnotes by focusing exclusively on naturalistic research skills during the first two months of the year, the cooperating teachers agreed and said they would be interested in taking fieldnotes themselves and in having the students in the Program take fieldnotes on most of the activities of the class throughout the coming year. That modification has been in operation this year.

Summary

Overall, I conclude that this process of involving student teachers as naturalistic inquirers works (student teachers can take fieldnotes, do simple qualitative analyses, write brief summary reports, and learn to think critically about educational issues while they learn to teach) and this is a very helpful approach for preparing teachers. It also helps the cooperating teachers do their job better and gives the university supervisor an immense wealth of information to judge the quality of the student teachers against, both formatively and summatively. This process should be used by other investigators and we should study it longitudinally with cohorts of student teachers to see what they do as teachers with the skills developed during these intense apprenticeships.

The results of this study have important implications for proponents of qualitative educational research as well as for teacher educators. Three of these are:

1. Naturalistic inquiry can be part of the teacher education process and can powerfully influence what preparing teachers see, hear, think, learn, and do as teachers. This should improve their performance.

2. Cooperating teachers can see the benefits of naturalistic inquiry to their own students and themselves and may do more naturalistic inquiry themselves so they are involved in ongoing research into learning and teaching and can contribute to the literature and be more interested in what others are finding, leading to a better integration of theory and practice.

3. This approach to supervision of student teachers is innovative and gives the university a valuable way to participate in preparing teachers that also benefits the faculty members who can keep learning and doing research and publishing while meeting their teaching responsibilities.

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